MITEL NETWORKS

# 5215/5220 IP Phones

SIP USER and ADMINISTRATOR GUIDE

it's about **YOU**

**NOTICE**

The information contained in this document is believed to be accurate in all respects but is not warranted by Mitel Networks™ Corporation (MITEL®). The information is subject to change without notice and should not be construed in any way as a commitment by Mitel or any of its affiliates or subsidiaries. Mitel and its affiliates and subsidiaries assume no responsibility for any errors or omissions in this document. Revisions of this document or new editions of it may be issued to incorporate such changes.

Mitel is a registered trademark of Mitel Networks Corporation.

Internet Explorer is a trademark of Microsoft Corporation.

Netscape Navigator is a trademark of Netscape Communications Corporation.

Other product names mentioned in this document may be trademarks of their respective companies and are hereby acknowledged.

# TABLE OF CONTENTS

**WELCOME ..... 1**

Supporting Documentation ..... 2

Accessing the Web Configuration Tool online Help ..... 2

Accessing Other Documentation ..... 2

**ABOUT SIP AND YOUR PHONE ..... 3**

User SIP Account ..... 3

Administrative Mode ..... 3

The 5215 IP Phone ..... 3

The 5220 IP Phone ..... 4

Elements of Your Phone ..... 5

Accessories for Your Phone ..... 6

Headsets ..... 6

Conference Units (5220 IP Phone only) ..... 6

**GETTING STARTED ..... 7**

Accessing Your Phone's Features ..... 7

The Superkey Menu Interface ..... 7

The Web Configuration Tool ..... 7

Menu Item Selection ..... 8

Entering Numbers and Letters ..... 8

5215 IP Phone ..... 8

5220 IP Phone ..... 8

Passwords ..... 9

Phone Passwords ..... 9

Web Configuration Tool Passwords ..... 10

Call Encryption Indicator ..... 10

Tips for Your Comfort and Safety ..... 10

Don't Cradle the Handset ..... 10

Protect your Hearing ..... 11

Adjust the Viewing Angle of Your Phone ..... 11

**CUSTOMIZING YOUR PHONE ..... 12**

Ringer Volume and Pitch ..... 12

Adjusting Ringer Volume ..... 12

Adjusting Ringer Volume During an Incoming Call ..... 12

Adjusting Ringer Pitch ..... 13

Handset Receiver Volume ..... 13
Adjusting Handset Receiver Volume ..... 13
Speaker Volume ..... 13
Adjusting Speaker Volume ..... 13
Display Contrast ..... 14
Adjusting Display Contrast ..... 14
Programming/Modifying/Deleting Personal Keys ..... 14
Display Language ..... 14
Setting Display Language ..... 14
**MAKING AND ANSWERING CALLS ..... 15**
Making Calls ..... 15
Dialing by Number ..... 15
Dialing by Name (5220 IP Phone only) ..... 16
Dialing by SIP URL or IP Address (5220 IP Phone only) ..... 16
Using Redial ..... 16
Answering Calls ..... 16
Using the Handset, Headset or Speaker to Answer Calls ..... 17
Enabling/Disabling Auto Answer ..... 17
**CALL HANDLING ..... 18**
Call Forward ..... 18
Programming Call Forward ..... 18
Enabling/Disabling Call Forward ..... 19
Call Transfer ..... 19
Transferring a Call to an Unconnected Third Party ..... 19
Transferring a Call to a Third Party Already on Hold ..... 20
Call Waiting ..... 20
Answering a Waiting Call While on Another Call ..... 20
Conference Call (Three-Way) ..... 20
Adding a Third Party to a Call in Progress ..... 20
Adding a Party On Hold to a Call in Progress ..... 21
Leaving a Conference Call ..... 21
Hold ..... 21
Putting a Call on Hold ..... 21
Retrieving a Call from Hold ..... 21
Changing On Hold Settings ..... 22
Messages - Advisory ..... 22
Creating an Advisory Message ..... 22
Enabling/Disabling your Advisory Message ..... 22

Messaging – Voice Mail ..... 23
Accessing your Voice Mail Messages ..... 23
**USING ADVANCED FEATURES ..... 24**
Do Not Disturb ..... 24
Enabling/Disabling Do Not Disturb ..... 24
Call Logs ..... 24
Viewing a Call Log Entry ..... 25
Deleting a Call Log Entry ..... 25
Dialing a Call Log Entry ..... 26
Handset, Handsfree and Headset Modes ..... 26
Switching Between Handset and Handsfree Modes ..... 26
Switching Between Handset and Headset Modes ..... 26
Switching Between Headset and Handsfree Modes ..... 27
Muting a Call ..... 27
Enabling/Disabling Muting a Call ..... 27
Phone Book ..... 27
Creating a Phone Book Entry ..... 27
Modifying a Phone Book Entry ..... 28
Deleting a Phone Book Entry ..... 28
Making Calls from the Phone Book ..... 29
Speed Dial ..... 29
Viewing a Speed Dial Key ..... 29
Programming a Speed Dial Key ..... 29
Editing a Speed Dial Key ..... 30
Deleting a Speed Dial Key ..... 31
Making Calls Using Speed Dial ..... 31
Time and Date ..... 31
Changing the Time and Date ..... 31
**ADMINISTRATOR TOOLS ..... 33**
Phone Passwords ..... 33
Changing Phone Passwords ..... 34
Device Parameters ..... 34
Viewing the Software Version and MAC Address ..... 34
Protocols ..... 35
Enabling/Disabling Communication and Media Protocols ..... 35
User SIP Accounts ..... 35
Configuring a User SIP Account ..... 36
Modifying the Display Name ..... 36
Viewing a User Name ..... 36

View/Modify the Network Settings....36
Viewing the IP and MAC Addresses....36
Modifying Network Settings....36
Upgrade the Phone's Firmware....37
Viewing the Firmware Version....37
Upgrading the Firmware....37
Voice Mail....38
Configuring Voice Mail....38
Daylight Savings....39
Adjusting Daylight Savings....39
Shared Line Keys....39
Programming Shared Line Keys....39
Additional Settings....40
Configuration Files....40
Hot Line....41
Media Configuration....41
**APPENDIX A — SUPERKEY MENU INTERFACE....42**
Superkey Menu Interface Menus and Settings....42
**APPENDIX B — CONFIGURING SIP SETTINGS IN THE BOOT PROGRAM....44**
SIP Configuration Menus and Settings....44
Network Settings in the Boot Program....47
Modifying Network Settings in the Boot Program....47
Static Network Parameters in the Boot Program....47
Configuring Network Parameters in the Boot Program....47
Hardware Settings in the Boot Program....48
Configuring Hardware Settings in the Boot Program....48
Firmware Upgrade in the Boot Program....49
Performing a Firmware Upgrade in the Boot Program....49
Phone Mode in the Boot Program....50
Changing the Phone Mode in the Boot Program....50
Factory Default Settings in the Boot Program....51
Restoring Factory Default Settings in the Boot Program....51
Firmware Versions in the Boot Program....51
Viewing Firmware Versions in the Boot Program....51
**APPENDIX C — TROUBLESHOOTING....52**
Phones Working Behind a Non-SIP Compliant Router....52
Phone Error Messages....53

Maintenance Logs ..... 54
Viewing Maintenance Logs ..... 54
Saving Maintenance Logs ..... 54
Audio ..... 54
Time and Date ..... 54
Setting the Correct Time and Date on the Phone ..... 54
Port Mirroring ..... 55
Enabling/Disabling Port Mirroring ..... 55
Ping Test ..... 55
Pinging an IP Address ..... 55
DHCP Trace ..... 56
Performing a DHCP Trace ..... 56
Diagnostics ..... 56
Performing a Diagnostics Test ..... 56
**GLOSSARY ..... 57**

# Welcome

This User and Administrator Guide contains information on how to configure and use your Mitel® 5215 IP Phone or Mitel 5220 IP Phone with Session Initiation Protocol (SIP).

This guide is organized as follows, with a glossary of acronyms at the end of the document:

- **Welcome** (this section): purpose of this User and Administrator Guide, and information on how to access supporting documentation, such as the Web Configuration Tool online Help.
- **About SIP and Your Phone**: information on SIP, and the 5215 and 5220 IP Phones, their features and supported accessories.
- **Getting Started**: information on how to access the Superkey Menu Interface and the Web Configuration Tool to program and use your phone's features. Also, information on how to enter data on your SIP-supported phone, and password, call encryption and safety information.
- **Customizing Your Phone**: procedures on how to personalize your phone to meet your needs. For example, setting the display contrast and language.
- **Making and Answering Calls**: procedures on how to make and answer "regular" and SIP calls.
- **Call Handling**: information and procedures on how to handle calls. For example, forwarding and transferring calls, and setting an advisory message.
- **Using Advanced Features**: information and procedures on how to use the more advanced features, such as Do Not Disturb, Call Logs and Phone Book.
- **Administrator Tools**: information and procedures on how to use administrative features, such as configuring user SIP accounts, upgrading the phone's firmware and modifying network settings in the main program. Also, information on administrator passwords.
- **Appendix A — Superkey Menu Interface**: overview of the Superkey Menu Interface that you use to program your phone's features.
- **Appendix B — Configuring SIP Settings in the Boot Program**: overview of the boot program SIP configuration menus that the Administrator can use to configure a phone's SIP settings.
- **Appendix C — Troubleshooting**: provides troubleshooting information.
- **Glossary**: definitions of acronyms found in this User and Administrator Guide.

# Supporting Documentation

## Accessing the Web Configuration Tool online Help

As you will learn in *Accessing Your Phone's Features* on page 7, you can use a web browser called the Web Configuration Tool to program and modify features on your phone. For information on how to use this tool, refer to the Web Configuration Tool online Help.

To access the Web Configuration Tool online Help:

1. Access the Web Configuration Tool home page (see *Accessing the Web Configuration Tool* on page 8).
2. Scroll to the bottom of the page.
3. In the left pane, click **Help** under **Support**. The Help page opens, presenting links to this guide and the user Web Configuration Tool online Help.

**Note:** If you have administrative privileges, you will have access to both the user and the administrator Web Configuration Tool online Help systems.

## Accessing Other Documentation

To access other Mitel phone and peripheral documentation:

1. In your browser, go to www.mitel.com
2. Move your mouse pointer over **Support**, and then select **Documentation Library**.
3. From the drop-down list, select **User Guides**.

# About SIP and Your Phone

The following Mitel IP Phones support SIP:

- 5215 IP Phone
- 5220 IP Phone.

In SIP mode, your 5215 or 5220 IP Phone becomes an intelligent SIP phone that manages its own call states and features. SIP uses the Internet to connect your 5215 or 5220 IP Phone to other SIP phones. To make a call you can dial by SIP URL or IP address. You can also make calls to phones on the Public Switched Telephone Network (PSTN), or “regular” phone network. In addition, if you have an account with a SIP Service Provider, you can dial by a user ID (Identification) name or extension number.

For information on how to program and modify features of your SIP-supported phone, refer to this guide and to the Web Configuration Tool online Help (see *Supporting Documentation* on page 2). For installation and wall-mounting information, refer to the Installation Guide packaged with your phone.

## User SIP Account

To make a call by dialing a user ID name or extension number, you need a user name and password, and must be registered with a SIP Service Provider; otherwise, you can still use the phone, but will not be able to dial by user ID name or extension number. The Administrator usually configures SIP accounts.

## Administrative Mode

Using the administrator user name and password, the Administrator can modify some settings such as network and SIP Service Provider information, and perform such tasks as a firmware upgrade. For more information, see *Administrator Tools* on page 33.

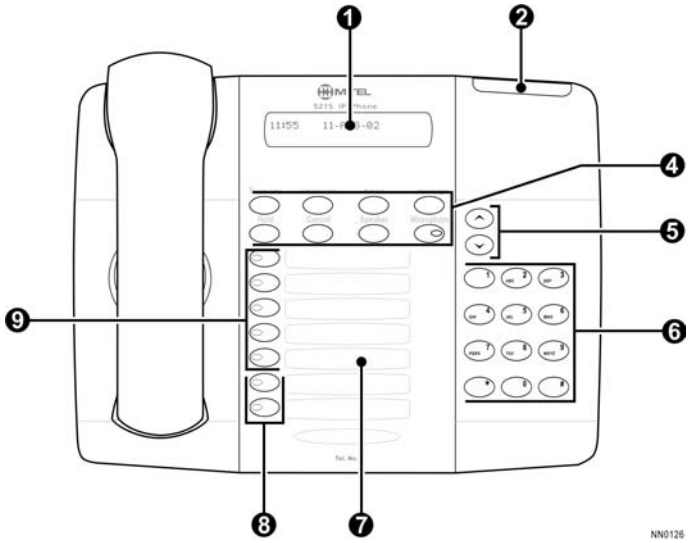
## The 5215 IP Phone

The 5215 IP Phone has eight fixed-function keys, two arrow keys and seven personal keys with built-in status indicators. The personal key on the bottom left is always your Prime Line. Other personal keys can be programmed as Speed Dial keys. In addition, your Administrator can program the remaining personal keys as Shared Line keys.

The 5215 IP Phone also offers a display-assisted selection of features, on-hook dialing and a large Message Waiting/Ringing Indicator.

For more key and feature information, see *Elements of Your Phone* on page 5.

**Figure 1: 5215 IP Phone**



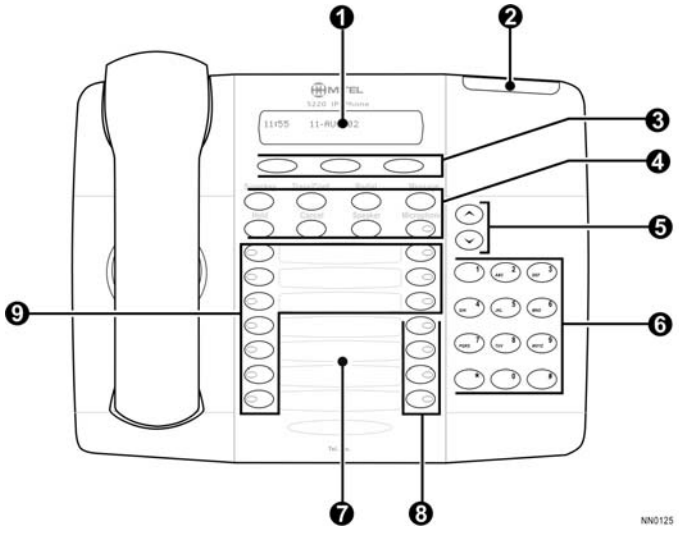

# The 5220 IP Phone

The 5220 IP Phone has eight fixed-function keys, two arrow keys, three softkeys and 14 personal keys with built-in status indicators. The personal key on the bottom right is always your Prime Line. Other personal keys can be programmed as Speed Dial keys. In addition, your Administrator can program the remaining personal keys as Shared Line keys.

Your 5220 IP Phone also offers a display-assisted selection of features, on-hook dialing and a large Message Waiting/Ringer Indicator.

For more key and feature information, see *Elements of Your Phone* on page 5.

**Figure 2: 5220 IP Phone**



# Elements of Your Phone

This section describes elements of your phone, and is organized in relation to the number call-outs (e.g. ❶) in Figures 1 and 2 (on page 4).

## ❶ Display Screen

Provides a high-resolution, back-lit viewing area for ease of use. When the phone is idle, the time and date appear on the display screen. When using the Superkey Menu Interface, prompts and feature information appear on the display screen.

## ❷ Message Waiting/Ringing Indicator

Flashes orange when you have a new message in your voice mailbox or an incoming call. The Message Waiting/Ringing Indicator is solid orange while the phone reboots.

## ❸ Soft Keys (5220 IP Phone only)

Select associated commands listed on the bottom line of the display screen. These commands change dynamically depending on the modes of the operation and the menu currently displayed.

## ❹ Fixed-function Keys

Give you access to the following phone functions:

- **Superkey** (blue): provides access to the phone's menus.
- **Trans/Conf**: initiates a call transfer or establishes a three-party conference call.
- **Redial**: calls the last number, name, SIP URL or IP address dialed.
- **Message**: provides access to your voice mailbox (optional).
- **Hold** (red): places the current call on hold.
- **Cancel**: ends a call when pressed during the call, and, when you are programming the phone, eliminates any input and returns to the previous menu level.
- **Speaker**: initiates a handsfree call, switches between handset and handsfree mode or disconnects a call while in handsfree mode.
- **Microphone**: toggles the microphone off and on. In handsfree mode, an orange light indicates that the microphone is on; therefore, your party hears you. In handset and headset mode, the microphone key acts like a Mute key, and an orange light indicates that the microphone is off; therefore, your party cannot hear you.

## ❺ Arrow Keys

Adjust the volume of the handset, headset, speaker or ringer. When entering letters, these keys change character input from upper or lower case and vice versa. These keys are also used to change the display contrast, and to navigate through some menus when programming the phone. In this guide, the arrow keys are represented by and .

## ❻ Keypad

When making a call, used to enter the number, name, SIP URL or IP address you want to dial. When programming the 5215 or 5220 IP Phone, used to enter information. Depending

on the context, lets you enter only numbers, or numbers or letters and some special characters.

### ❼ Designation Card and Lens

Used for labeling **Personal** keys and for holding the designation card in place. For information on how to remove the lens and install the designation card, refer to the Installation Guide packaged with your phone.

### ❽ Line Keys

Allow you to initiate, receive and manage calls by using the pre-assigned **Line** keys. The default **Line** key is Line 1. On the 5215 IP Phone, Line 1 is the bottom left key (see Figure 1 on page 4), and, on the 5220 IP Phone, Line 1 is the bottom right key (see Figure 2 on page 4). If a line is busy, subsequent calls are received on the next available **Line** keys. There are two **Line** keys on the 5215 IP Phone, and four **Line** keys on the 5220 IP Phone. The **Line** keys are not assigned to a specific directory number or address (multi-line operation).

### ❾ Personal Keys

On the 5215 IP Phone, keys 3 and 4 (counting upwards from the bottom; see Figure 1 on page 4) provide one-touch access to programmed Speed Dial numbers. In addition, your Administrator can program these keys as Shared Line keys. Key 5 is pre-assigned as the **Headset** key, key 6 is the **Advisory Message** key, and key 7 is the **Call Logs/Phone Book** key.

On the 5220 IP Phone, keys 1 through 7 (in the left row, counting upwards from the bottom; see Figure 2 on page 4) provide one-touch access to programmed Speed Dial numbers. In addition, your Administrator can program these keys as Shared Line keys. In the right row, key 5 (counting from the bottom upwards) is pre-assigned as the **Headset** key, key 6 is the **Advisory Message** key, and key 7 is the **Call Logs/Phone Book** key.

# Accessories for Your Phone

## Headsets

The 5215 and 5220 IP Phones support the Mitel Headset with a Feature Control Switch. The headset must be installed in the dedicated headset jack. Installation will disable your handset microphone. Disconnecting the headset at the jack or at the quick-disconnect plug restores handset operation. If handset operation is required for an extended period of time, press the **Headset** key to return the phone to handset mode.

## Conference Units (5220 IP Phone only)

Mitel supports the 5310 IP Boardroom Conference Unit for use with the 5220 IP Phone. For more information on the conference unit, refer to the 5310 IP Boardroom Conference Unit documentation (see *Supporting Documentation* on page 2) or contact your Administrator.

# Getting Started

After installing and familiarizing yourself with your 5215 or 5220 IP Phone, you are ready to access and use your phone's SIP and "regular" features. To do so, you may use either of the following two interfaces:

- Superkey Menu Interface
- Web Configuration Tool.

This section explains how to access both interfaces so you can then customize your phone's features (see *Customizing Your Phone* on page 12). In addition, this section provides important information about

- Phone-specific menu selection and data entry.
- Phone and Web Configuration Tool passwords.
- Call encryption.
- Your comfort and safety.

## Accessing Your Phone's Features

### The Superkey Menu Interface

You can use the fixed-function keys to directly access most features on your phone. For other features, use the phone's Superkey Menu Interface. To access the Superkey Menu Interface, simply press **Superkey** on your phone. For more information on the Superkey menus, see *Appendix A — Superkey Menu Interface* on page 42. For menu selection information, see *Menu Item Selection* on page 8.

### The Web Configuration Tool

In addition to your phone, you can use the Web Configuration Tool to make calls, and to personalize and modify your phone's settings. As well, your Administrator can use the tool to perform administrative tasks. The Web Configuration Tool is accessible from any Personal Computer (PC) connected to the Internet and running a web browser that is either

- Netscape Navigator 4.8 or later.
- Internet Explorer 4 or later.
- Any other equivalent browser.

**Note:** If your network is protected by a firewall, you may not be able to access your phone using the Web Configuration Tool from outside the firewall.

There are two login access accounts for the tool: an administrator account and a user account. The account used to log in determines the type of web configuration pages accessed. For instructions on how to access the Web Configuration Tool, see *Accessing the Web Configuration Tool* on page 8. For password information, see *Passwords* on page 9. For

information on how to use the Web Configuration Tool, access the Web Configuration Tool online Help (see *Supporting Documentation* on page 2).

### Accessing the Web Configuration Tool

To access the Web Configuration Tool:

1. On your phone, do the following to obtain your phone's IP address:
   - Press **Superkey**.
   - Press the **Line 1** (Prime Line) key. Your phone's IP address appears.
   - Write down the IP address, and then press **Superkey** to return to the default display.
2. On your PC, launch your browser.
3. In your browser's **URL** or **Address** field, enter your phone's IP address. The Web Configuration Tool login screen appears.
4. In the appropriate fields, enter your Web Configuration Tool user name and password.
5. Click **OK**. The Web Configuration Tool home page launches.

# Menu Item Selection

Before using your phone, note the following menu selection and data entry information:

- If you have a 5215 IP Phone, press ✳, **0** and **#** to select menu items as indicated on the display. For example, if options ✳=YES 0=DEFAULT #=NO appear and you want to select YES, press ✳ on the keypad.
- If you have a 5220 IP Phone, press the three softkeys to select menu items as indicated on the display.

# Entering Numbers and Letters

## 5215 IP Phone

The 5215 IP Phone allows you to use the keypad to enter numbers to dial

- Extension numbers.
- Phone numbers (PSTN numbers).

**Note:** Keys ✳ and **#** on the keypad cannot be used when dialing phone numbers on the 5215 IP Phone.

To delete the last entered number, press ✳.

## 5220 IP Phone

Depending on the context, the 5220 IP Phone's keypad allows you to enter only numbers, or numbers, letters and some special characters. On the 5220 IP Phone, you can dial

- Extension numbers.
- Phone numbers (PSTN numbers).
- IP addresses.
- SIP URLs.
- User ID names.

When entering letters and special characters, rapidly press the appropriate number key until the desired character appears on the display. Letters correspond to those on the keypad, and characters to the table below. A flashing cursor indicates the position of the character you are entering. The cursor advances if you press a different keypad key, or waits approximately one second.

To enter an uppercase letter, press before entering the letter. Press to return to lowercase mode. To delete the character last entered, press the <—— softkey.

**Table 1: Letter and Character Entry**

| Dial Pad Key | Press | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Once | Twice | 3 Times | 4 Times | 5 Times | 6 Times | 7 Times | 8 Times | 9 Times |
| **1** | 1 | space | ? | ! | ~ | \| | | | |
| **2** | 2 | a | b | c | | | | | |
| **3** | 3 | d | e | f | | | | | |
| **4** | 4 | g | h | i | | | | | |
| **5** | 5 | j | k | l | | | | | |
| **6** | 6 | m | n | o | | | | | |
| **7** | 7 | p | q | r | s | | | | |
| **8** | 8 | t | u | v | | | | | |
| **9** | 9 | w | x | y | z | | | | |
| **0** | 0 | + | & | % | $ | \ | “ | | |
| * | * | . | = | : | / | ; | , | – | _ |
| **#** | # | @ | ( | ) | [ | ] | < | > | |

# Passwords

User and administrator user names and passwords are required for

- Registering your phone with your SIP Service Provider.
- Accessing certain SIP-related menus through the phone’s Superkey Menu Interface (Administrator only).
- Accessing the Web Configuration Tool.

## Phone Passwords

Only your Administrator requires a user name and password to access all configurable SIP features of the 5215 or 5220 IP Phone.

## Web Configuration Tool Passwords

As learned in *Accessing Your Phone's Features* on page 7, you can use a web browser called the Web Configuration Tool to program and modify features on your phone. When first accessing the Web Configuration Tool, default user names and passwords for the Administrator and the user are required. It is recommended that you change these passwords as soon as possible to prevent unauthorized changes to your settings.

**CAUTION: Do not modify any settings that may affect the transmission of voice or tones (such as DTMF) to the local telephone network through your Service Provider, except at the express instruction of your Service Provider. An example of such a modification would be to change the CODEC type. Failure to heed this cautionary note may render your phone non-compliant to local regulations.**

**Table 2: Web Configuration Tool Default User Names and Passwords**

| | Default User Name | Default Password (5215 IP Phone) | Default Password (5220 IP Phone) |
|---|---|---|---|
| **Administrator** | admin | 5215 | 5220 |
| **User** | user | hello | hello |

**Note:** Your Administrator may change your default user name and password before you log into the Web Configuration Tool for the first time; therefore, you may need to obtain your new user name and password from your Administrator.

# Call Encryption Indicator

The 5215 and 5220 IP Phones automatically provide Secure Real-time Transport Protocol (SRTP) voice encryption when connected to a phone that also supports SRTP. A "secured call" icon (closed padlock) appears on the display for encrypted calls, and for conference calls in which all connected parties support SRTP. An "unsecured call" icon (open padlock) appears on the display when the call connection is not secured (the connected party (or parties) does not support SRTP encryption). If SRTP is disabled, an icon will not appear.

For an icon to appear, SRTP must be enabled. To enable or disable SRTP, your Administrator must access the Protocols page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

**Note:** A "secured call" icon or an "unsecured call" icon appears only when you have a voice connection. For example, an icon will appear if you are speaking to a party; an icon will not appear if you receive a busy signal.

# Tips for Your Comfort and Safety

## Don't Cradle the Handset

Prolonged use of the handset can lead to neck, shoulder or back discomfort, especially if you cradle the handset between your ear and shoulder. If you use your phone often, you may find it more comfortable to use a headset.

## Protect your Hearing

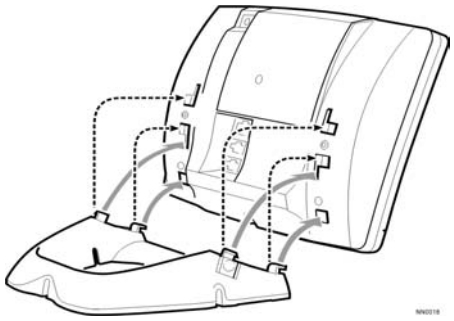
The 5215 and 5220 IP Phones have a control for adjusting the volume of the handset receiver or headset (see *Customizing Your Phone* on page 12). Because continuous exposure to loud sounds can contribute to hearing loss, keep the volume at a moderate level.

## Adjust the Viewing Angle of Your Phone

To tilt your phone for better viewing of the keys:

1. Press the release tabs on the sides of the stand.
2. Hinge the two front hooks and snap the two back hooks of the stand into either the upper or lower notches on the back of the phone.

**Figure 3: Adjusting the Angle of the Phone**



# Customizing Your Phone

This section provides procedures to customize the following aspects of your 5215 or 5220 IP Phone:

- Ringer volume and pitch
- Handset receiver volume
- Speaker volume
- Display contrast
- Personal keys
- Language settings.

## Ringer Volume and Pitch

**Note:** You cannot change your ringer settings while on a call.

### Adjusting Ringer Volume

To adjust the ringer volume on your phone:

1. Press **Superkey**, and then press **>>** until SETTINGS & OPTIONS? appears on the display.
2. Press **OK**, and then press ▼ until RINGER SOUNDS? appears on the display.
3. Press **OK**. SET RINGER VOLUME? appears on the display.
4. Press **YES**. The phone starts to ring.
5. Press or to adjust the volume to the desired level, and then press **SAVE**. After the information is saved, SET RINGER VOLUME? appears on the display.
6. Press **NO**. SET RINGER PITCH? appears on the display.
7. Do one of the following:
   - To return to the main menu, press **NO**.
   - To return to the default display, press **Superkey**.

### Adjusting Ringer Volume During an Incoming Call

To adjust the ringer volume while your phone is ringing with an incoming call:

- Press and .

## Adjusting Ringer Pitch

To adjust the ringer pitch on your phone:

1. Press **Superkey**, and then press **>>** until SETTINGS & OPTIONS? appears on the display.
2. Press **OK**, and then press ▼ until RINGER SOUNDS? appears on the display.
3. Press **OK**, and then press **NO** until SET RINGER PITCH? appears on the display.
4. Press **YES**. The phone starts to ring.
5. Press or to adjust the pitch to the desired level, and then press **SAVE**. After the information is saved, SET RINGER PITCH? appears on the display.
6. Do one of the following:
   - To return to the main menu, press **NO**.
   - To return to the default display, press **Superkey**.

# Handset Receiver Volume

## Adjusting Handset Receiver Volume

To adjust the handset receiver volume when you are using the handset:

- Press and , and then hang up. The new setting stays in effect until you change it again.

**Note:** If your phone loses power, the settings will return to the default settings.

# Speaker Volume

## Adjusting Speaker Volume

To adjust the speaker volume when on a handsfree call:

- Press and , and then hang up. The new setting stays in effect until you change it again.

**Note:** If your phone loses power, the settings will return to the default settings.

# Display Contrast

## Adjusting Display Contrast

You can adjust the display contrast of your 5215 or 5220 IP Phone to suit your preference.

To adjust the display contrast of your phone:

- While the phone is idle, press and . The new setting stays in effect until you change it again.

**Note:** If your phone loses power, the settings will return to the default settings.

# Programming/Modifying/Deleting Personal Keys

You can program a **Personal** key as a Speed Dial key. You can also view, program, modify or delete the information programmed on a **Personal** key. For information, see *Speed Dial* on page 29.

In addition, your Administrator can program available **Personal** keys as Shared Line keys.

**Note:** You cannot change your **Personal** keys settings while on a call.

# Display Language

## Setting Display Language

To set the display language:

1. Press **Superkey**, and then press **>>** until SETTINGS & OPTIONS? appears on the display.
2. Press **OK**, and then press ▼ until LANGUAGE? appears on the display.
3. Press **OK**, and then press **NO** until the desired language appears.
4. Once the desired language appears, press **YES**. LANGUAGE? appears on the display.
5. Do one of the following:
   - To return to the main menu, press **EXIT**.
   - To return to the default display, press **Superkey**.

# Making and Answering Calls

Once your 5215 or 5220 IP Phone is installed and configured to SIP mode, you can start using your phone and all of its features, including “regular” and SIP.

This section describes the different methods available to make and answer calls using your SIP-supported 5215 or 5220 IP Phone.

## Making Calls

With SIP, your phone allows you to dial by

- Extension number, or phone number. To dial an extension number, you must be registered with a SIP Service Provider. If you are registered with a SIP Service Provider and want to dial a “regular” phone number, your SIP Service Provider must provide access to the PSTN.
- User ID name (5220 IP Phone only). To dial a user ID name, you must be registered with a SIP Service Provider.
- SIP URL or IP address (5220 IP Phone only).

You can also press **Redial** to make a call.

**Note:** For information on dialing a Call Logs entry, see *Dialing a Call Log Entry* on page 26. For information on dialing a Phone Book entry, see *Making Calls from the Phone Book* on page 29. For information on making a Speed Dial call, see *Making Calls Using Speed Dial* on page 31.

You can make and receive calls using the handset, headset or speaker. For more information, see *Handset, Handsfree and Headset Modes* on page 26.

### Dialing by Number

To dial by phone number or extension number:

1. Lift the handset.
2. Enter the number of the party you want to call.
3. Press **DIAL**. The number is dialed, and the selected **Line** key turns green.

**Note:** If you are dialing a phone number and are registered with a SIP Service Provider, your SIP Service Provider must have access to PSTN. To dial an extension number, you must be registered with a SIP Service Provider. For more information, contact your Administrator.

## Dialing by Name (5220 IP Phone only)

To dial by name:

1. Lift the handset.
2. Press **NAME**.
3. Enter the name of the party you want to call.

   **Note:** If the name has more than 20 characters, only the last 20 characters will appear.
4. Press **DIAL**. The name is dialed, and the selected **Line** key turns green.

**Note:** To dial by a user ID name, you must be registered with a SIP Service Provider. For more information, contact your Administrator.

## Dialing by SIP URL or IP Address (5220 IP Phone only)

To dial by SIP URL or IP address:

1. Lift the handset.
2. Press **URL**, and then enter the SIP URL or IP address of the party you want to call.

   **Note:** If the SIP URL exceeds 20 characters, only the last 20 characters will appear.
3. Press **DIAL**. The SIP URL or IP address is dialed, and the selected **Line** key turns green.

**Note:** For character entry information, see *Entering Numbers and Letters* on page 8.

## Using Redial

Redial calls back the last party you dialed.

**Note:** Your phone will not remember the last outgoing call if power is lost.

To make a Redial call:

1. Lift the handset.
2. Press **Redial**. The last destination called is dialed, and the selected **Line** key turns green.

# Answering Calls

An incoming call will ring on the first available line, or **Line 1** if all lines are free. If all lines are busy and Call Forward – Busy (see *Enabling/Disabling Call Forward* on page 19) is not enabled, the caller gets a busy signal. While the phone is ringing, the Message Waiting/Ringing Indicator flashes orange, the name of the caller appears and the associated **Line** key flashes green.

## Using the Handset, Headset or Speaker to Answer Calls

To answer a call, do one of the following:

- For handset mode, lift the handset.
- For headset mode, press the **Headset** key, and then press the flashing green **Line** key.
- For handsfree mode, press **Speaker**.

For more information on handset, handsfree (Speaker) or headset calls, see *Handset, Handsfree and Headset Modes* on page 26.

## Enabling/Disabling Auto Answer

You can also use Auto Answer to automatically answer incoming calls. To enable or disable Auto Answer, access the Feature Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

# Call Handling

You can use the Superkey Menu Interface or the Web Configuration Tool to access features explained in this section. While on a call, you can use the Web Configuration Tool to change some of these settings, but the changes will not take effect until you have finished the call.

## Call Forward

Call Forward lets you redirect incoming calls to an alternate number. You can program either of the following three Call Forward options:

- Call Forward Always: redirects all incoming calls regardless of the state of your phone
- Call Forward No Answer: redirects calls if you don't answer after the programmed number of rings (1 – 10)
- Call Forward Busy: redirects calls when all lines are busy.

Your voice mailbox is the default destination for all Call Forward options. Call Forward Off is the default setting for all three options. You can turn on Call Forward No Answer and Call Forward Busy at the same time.

### Programming Call Forward

**Note:** You cannot change your Call Forward settings while on a call.

To set up Call Forward:

1. Press **Superkey**, and then press **>>** until SETTINGS & OPTIONS? appears on the display.
2. Press **OK**. CALL FORWARDING? appears on the display.
3. Press **OK**. FWD ALWAYS: <current status> appears on the display.
4. To navigate to the desired Call Forwarding option, press ▼.
5. Once the desired Call Forwarding option appears, press **OK**.
6. Press **REVIEW**. The current forwarding destination appears on the display. If nothing is currently programmed, the top line of the display is blank.
7. (Call Forward No Answer only) Press **OPTIONS**, enter the number of desired rings (1 – 10) before a call is forwarded, and then press **SAVE**.
8. Press **CHANGE**, and then do one of the following:
   - To enter a URL as the destination, press **URL**, and then enter the URL.
   - To enter a name as the destination, press **NAME**, and then enter the name.
9. Press **SAVE**. After the information is saved, the same Call Forwarding option appears on the display with its new status.
10. Do one of the following:
    - To return to the main menu, press **EXIT**.
    - To return to the default display, press **Superkey**.

**Note:** You can also use the Web Configuration Tool to program Call Forward. To do so, access the tool's Feature Configuration page (see *The Web Configuration Tool* on page 7).

## Enabling/Disabling Call Forward

To enable or disable Call Forward:

1. Press **Superkey**, and then press **>>** until SETTINGS & OPTIONS? appears on the display.
2. Press **OK**. CALL FORWARDING? appears on the display.
3. Press **OK**. FWD ALWAYS: <current status> appears on the display.
4. To navigate to the desired Call Forwarding option, press ▼.
5. Once the desired Call Forwarding option appears, press **TURNON** or **TURNOFF** to enable or disable the Call Forwarding option. The Call Forwarding option and its new status appears on the display.
6. Press **OK**, and then press **Superkey** to return to the default display.

**Note:** You can also use the Web Configuration Tool to enable or disable Call Forward. To do so, access the tool's Feature Configuration page (see *The Web Configuration Tool* on page 7).

# Call Transfer

You can transfer an active call to another party. To do so, at least one line must be free on your phone.

**Note**: The 5215 IP Phone supports two lines, and the 5220 IP Phone supports four lines. If all lines are busy on your phone, none of your callers will be able to transfer their call away from you to another phone. You must first free up one of the lines to allow callers to transfer a call away from your phone.

**Note:** During a conference call, any party can perform a call transfer when one line on the phone that initiated the conference call is available (i.e. not in use). For conference call information, see *Conference Call (Three-Way)* on page 20.

## Transferring a Call to an Unconnected Third Party

To transfer a call to an unconnected third party:

1. While on a call, press **Trans/Conf**. The call is put on hold.
2. Press a free **Line** key.
3. Call the party to whom you want to transfer the call, and then do one of the following:
   - To talk to this party, wait until the connection is established, speak to the party, press **Trans/Conf** to transfer the held call, and then hang up. This is an Attended Call Transfer.

   **Note:** On a 5220 IP Phone, you can choose to press the **TRANSFR** softkey to transfer the held call during an Attended Call.

- To transfer the call without speaking to this party, immediately press **Trans/Conf**, and then hang up. The held call will be transferred to the call in progress. This is called a Blind or Unattended Call Transfer.
- To cancel the transfer, press **Cancel**. You are returned to the held call.

## Transferring a Call to a Third Party Already on Hold

To transfer a call to a third party already on hold:

1. While on a call, press **Trans/Conf**. The call is put on hold.
2. Press the **Line** key of the call on hold, and then press **Trans/Conf**.
3. Hang up.

# Call Waiting

On the 5215 IP Phone, you can have one call waiting while you are connected on another call. On the 5220 IP Phone, you can have a maximum of three calls waiting – any new call goes to the next free line. If all lines are busy, the caller gets a busy signal.

When a new call comes in, you hear a call waiting tone, the name of the new caller appears, and the next available **Line** key flashes green.

## Answering a Waiting Call While on Another Call

To answer a waiting call while you are on another call:

- Press the flashing green **Line** key of the incoming call. The current call is put on hold, and you are connected to the new caller. For more information on holding calls, see *Hold* on page 21.

# Conference Call (Three-Way)

**Note:** During a conference call, any party can perform a call transfer when one line on the phone that initiated the conference call is available (i.e. not in use). For call transfer information, see *Call Transfer* on page 19.

## Adding a Third Party to a Call in Progress

To add a third party to a call already in progress:

1. Press **Trans/Conf**. The current call is put on hold.
2. Press a free **Line** key, and then make a call (see *Making Calls* on page 15).
3. Once you have connected with the new party, press **Trans/Conf**. The call put on hold in step 1 is connected to the call in progress.

   **Note:** If the new party does not answer, press **Cancel** twice to return to the held party.

## Adding a Party On Hold to a Call in Progress

To add a held party to a call in progress:

1. Press **Trans/Conf**. The current call is put on hold.
2. Press the **Line** key of the party already on hold.
3. Once you have connected with the new party, press **Trans/Conf**. The call put on hold in step 1 is connected to the call in progress.

## Leaving a Conference Call

To leave a conference call, do one of the following:

- Hang up.
- Press **HANGUP** (5220 IP Phone only).
- Press **Cancel**.

**Note:** If the originator of the conference call hangs up, then the other two parties do not remain connected. If either of the called parties hangs up, the call will remain connected.

# Hold

The 5215 IP Phone supports a maximum of two held calls at the same time. The 5220 IP Phone supports a maximum of four held calls.

## Putting a Call on Hold

To put a call on hold:

- Press **Hold**. The associated **Line** key flashes green.

## Retrieving a Call from Hold

To retrieve a call from hold:

- Press the associated flashing **Line** key. The **Line** key becomes a steady green.

## Changing On Hold Settings

When you place a call on hold, you will hear a regular beep after a programmed delay to remind you that you have a call on hold. If the handset is in its cradle, you will hear the beep through the handsfree speaker. When another party puts you on hold, you hear a regular beep to remind you that you are on hold. You can turn off this beep, if desired.

To change the On Hold settings, access the Feature Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

**Note:** You cannot change your hold settings while on a call.

# Messages - Advisory

An advisory message appears on the display of your phone to inform people visiting your desk of your whereabouts.

## Creating an Advisory Message

To create your own advisory messages, access the Feature Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

## Enabling/Disabling your Advisory Message

To enable or disable your advisory message:

1. Press **Superkey**, and then press **>>** until SETTINGS & OPTIONS? appears on the display.
2. Press **OK**, and then press ▼ until ADVISORY MESSAGES? appears on the display.
3. Press **OK**. The first of several advisory messages appears on the display.
4. Press and to navigate to the desired message.
5. Press **TURNON** or **TURNOFF** to activate or deactivate the message. When activated, the advisory message key turns orange.
6. Do one of the following:
   - To return to the main menu, press **EXIT**.
   - To return to the default display, press **Superkey**. The advisory message alternates with the date and time on the default display.

**Note:** You can also use the Web Configuration Tool to enable or disable an advisory message. To do so, access the tool's Date/Time page (see *The Web Configuration Tool* on page 7).

# Messaging – Voice Mail

To receive and access voice mail messages, your Administrator must use the Web Configuration Tool to program your voice mailbox information.

When there is a new message in your voice mailbox, the Message Waiting/Ringing Indicator flashes orange.

**Note:** For administrative information on voice mail, see

*Voice* Mail on page 38.

## Accessing your Voice Mail Messages

To access your voice mail message(s):

1. Lift the handset, and then do one of the following:
   - Press **Message**.
   - (Optional) Enter your voice mailbox number.
2. Follow the voice prompts to enter your voice mailbox password, and to review, save or delete your message(s).

# Using Advanced Features

Like the call handling features (see *Call Handling* on page 18), you can use the Superkey Menu Interface or the Web Configuration Tool to access features explained in this section. While on a call, you can use the Web Configuration Tool to change some of these settings, but the changes will not take effect until you've finished the call.

## Do Not Disturb

Do Not Disturb forwards all calls directly to your voice mailbox; therefore, a ringing phone will not disturb you. If you do not have a voice mailbox set up, callers will get a busy signal.

**Note:** When Do Not Disturb is active, *DND ON* alternates with the date on the phone's display. If both Call Forward and Do Not Disturb are on, *DND ON* alternates with the time on the display.

**Note:** You cannot change your Do Not Disturb settings while on a call.

### Enabling/Disabling Do Not Disturb

To enable or disable Do Not Disturb:

1. Press **Superkey**, and then press **>>** until SETTINGS & OPTIONS? appears on the display.
2. Press **OK**, and then press ▼ until DO NOT DISTURB? appears on the display.
3. Press **OK**. DO NOT DISTURB <current status> appears on the display.
4. Press **TURNON** or **TURNOFF** to activate or deactivate Do Not Disturb. After the information is saved, DO NOT DISTURB <new status> appears on the display.
5. Do one of the following:
   - To return to the main menu, press **EXIT**.
   - To return to the default display, press **Superkey**.

**Note:** You can also use the Web Configuration Tool to enable or disable Do Not Disturb. To do so, access the tool's Feature Configuration page (see *The Web Configuration Tool* on page 7).

## Call Logs

Call Logs keeps a record of your missed, answered and outgoing calls. On the 5215 IP Phone, Call Logs records the five most recent calls for each of the three types of calls; on the 5220 IP Phone, the ten most recent calls for each of the three types of calls are recorded. For example, on the 5220 IP Phone the ten most recent incoming calls are logged while the ten most recent missed calls are logged. The most recent call appears at the top of each log.

The call information recorded includes the party name, number, SIP URL or IP address, the call duration, and the time and date of each call.

When you have missed incoming calls, the number of calls missed replaces the date on your phone's display.

**Note:** Call log information is automatically saved every 4 hours; therefore, if you reset your phone between that 4-hour interval, any missed, answered or outgoing calls that have occurred during that time will not be stored.

## Viewing a Call Log Entry

To view a missed, incoming or outgoing Call Log entry:

1. Do one of the following:
   - Press **Superkey**, and then press **>>** until CALL LOGS? appears on the display.
   - Press **Call Logs/Phone Book**, and then press **>>** until CALL LOGS? appears on the display.
2. Press **OK**, and then press ▼ to navigate to the desired log type (Missed Calls, Answered Calls or Outgoing Calls).
3. Press **OK**. The number of calls appears on the display.
4. Press and to navigate through the logged call entries.
5. When the desired entry appears on the display, press **DETAIL**, and then press **<<** and **>>** to view the entry information.
6. When you have finished, press **DONE**.
7. Press **Superkey** to return to the default display.

**Note:** You can also view missed, incoming or outgoing Call Log entries using the Web Configuration Tool. To do so, access the tool's Call Logs page (see *The Web Configuration Tool* on page 7).

## Deleting a Call Log Entry

To delete a missed, incoming or outgoing Call Log entry:

1. Do one of the following:
   - Press **Superkey**, and then press **>>** until CALL LOGS? appears on the display.
   - Press **Call Logs/Phone Book**, and then press **>>** until CALL LOGS? appears on the display.
2. Press **OK**, and then press ▼ to navigate to the desired log type (Missed Calls, Answered Calls or Outgoing Calls).
3. Press **OK**. The number of calls appears on the display.
4. Press and to navigate through the logged call entries.
5. When the desired entry appears on the display, press **DELETE**. CONFIRM DELETE? appears on the display.
6. Press **YES**. The log is deleted.
7. Press **Superkey** to return to the default display.

## Dialing a Call Log Entry

To dial a Call Log entry:

1. Do one of the following:
   - Press **Superkey**, and then press **>>** until CALL LOGS? appears on the display.
   - Press **Call Logs/Phone Book**, and then press **>>** until CALL LOGS? appears on the display.
2. Press **OK**, and then press ▼ to navigate to the desired log type (Missed Calls, Answered Calls or Outgoing Calls).
3. Press **OK**. The number of calls appears on the display.
4. Press and to navigate through the logged call entries.
5. When the desired entry appears on the display, press **DIAL**. The log is dialed and the phone returns to the default display.
6. Lift the handset.

# Handset, Handsfree and Headset Modes

## Switching Between Handset and Handsfree Modes

To go from handset to handsfree mode:

1. Press **Speaker**.
2. Hang up the handset. The **Microphone** key turns orange, and you can now use the speaker to communicate with your party.

To go from handsfree to handset mode:

- Lift the handset. The **Microphone** key turns off, and you can now use the handset to communicate with your party.

## Switching Between Handset and Headset Modes

To go from handset to headset mode:

1. Press the **Headset** key. The **Headset** key turns orange.
2. Hang up the handset. You can now use the headset to communicate with your party.

To go from headset to handset mode:

1. Lift the handset.
2. Press the **Headset** key. The **Headset** key turns off, and you can now use the handset to communicate with your party.

## Switching Between Headset and Handsfree Modes

To go from headset to handsfree mode:

- Press the **Headset** key, and then press **Speaker**. The **Headset** key turns off, the **Microphone** key turns orange, and you can now use the handsfree speaker to communicate with your party.

To go from handsfree to headset mode:

- Press the **Headset** key. The **Headset** key turns orange, the **Microphone** key turns off, and you can now use your headset to communicate with your party.

# Muting a Call

## Enabling/Disabling Muting a Call

To mute your phone so your party cannot hear you:

- Press **Microphone**. If you are in handset or headset mode, the **Microphone** key turns orange. If you are in handsfree mode, the **Microphone** key turns off.

To turn off the mute function:

- Press **Microphone** again.

# Phone Book

The Phone Book is a scrollable list of contacts from which you can make a call. On a 5215 IP Phone, your Phone Book can hold a maximum of 20 contacts. On a 5220 IP Phone, your Phone Book can hold a maximum of 60 contacts.

A Phone Book entry contains an automatic index number, the contact's name (maximum of 20 characters) and a number, SIP URL or an IP address.

You can also use the Web Configuration Tool to create or modify your Phone Book. To do so, access the tool's Phone Book page (see *The Web Configuration Tool* on page 7).

**Note:** You cannot change your Phone Book settings while on a call.

## Creating a Phone Book Entry

To create a Phone Book entry:

1. Do one of the following:
   - Press **Superkey**, and then press **>>** until PHONE BOOK? appears on the display.
   - Press **Call Logs/Phone Book**. PHONE BOOK? appears on the display.
2. Press **OK**. PHONE BOOK: <number of items> appears on the display.

3. Press and to navigate through the entries until ENTRY EMPTY appears on the display.
4. Press **ADDNEW**. PROGRAM ADDRESS? appears on the display.
5. Press **YES**, and then enter the IP address or SIP URL of the contact.

   **Note:** Press <— to delete characters.
6. Press **SUBMIT**. After the information is saved, PROGRAM NAME? appears on the display.
7. Press **YES**, and then enter the name of the contact.
8. Press **SUBMIT**. After the information is saved, the name of the contact appears on the display.
9. Press **Superkey** to return to the default display.

## Modifying a Phone Book Entry

To modify a Phone Book entry:

1. Do one of the following:
   - Press **Superkey**, and then press **>>** until PHONE BOOK? appears on the display.
   - Press **Call Logs/Phone Book**. PHONE BOOK? appears on the display.
2. Press **OK**. PHONE BOOK: <number of items> appears on the display.
3. Press and to navigate to the entry you want to modify.
4. Press **CHANGE**, and then press **EDIT**. PROGRAM ADDRESS? appears on the display.
5. Do one of the following:
   - To modify an address or a SIP URL, press **YES**, enter the address or SIP URL, and then press **SUBMIT**. After the information is saved, PROGRAM NAME? appears on the display.
   - To modify a name, press **NO**. PROGRAM NAME? appears on the display. Press **YES**, enter the name, and then press **SUBMIT**. After the information is saved, the modified name appears on the display.
6. Press **Superkey** to return to the default display.

## Deleting a Phone Book Entry

To delete a Phone Book entry:

1. Do one of the following:
   - Press **Superkey**, and then press **>>** until PHONE BOOK? appears on the display.
   - Press **Call Logs/Phone Book**. PHONE BOOK? appears on the display.
2. Press **OK**. PHONE BOOK: <number of items> appears on the display.
3. Press and to navigate to the entry you want to delete.
4. Press **CHANGE**, and then press **DELETE**. CONFIRM DELETE? appears on the display.
5. Press **CONFIRM**. The entry is deleted, and ENTRY EMPTY appears on the display.
6. Press **Superkey** to return to the default display.

## Making Calls from the Phone Book

To make calls from your Phone Book:

1. Do one of the following:
   - Press **Superkey**, and then press **>>** until PHONE BOOK? appears on the display.
   - Press **Call Logs/Phone Book**. PHONE BOOK? appears on the display.
2. Press **OK**. PHONE BOOK <number of items> appears on the display.
3. Press and to navigate to the entry you want to call.
4. Press **DIAL**. The entry is dialed, and the phone returns to the default display.
5. (Optional) Lift the handset.

**Note:** You can also use the Web Configuration Tool to make calls from your Phone Book. To do so, access the tool's Phone Book page (see *The Web Configuration Tool* on page 7).

# Speed Dial

You can program a **Personal** key as a Speed Dial to call someone with one key press.

On the 5215 IP Phone, you can program **Personal** keys 3 and 4 as Speed Dials. On the 5220 IP Phone, you can program **Personal** keys 1 through 7 in the left row as Speed Dials. For more **Personal** key information, see *Elements of Your Phone* on page 5.

**Note:** Your Administrator can use the Web Configuration Tool to view and modify **Line** keys or **Personal** keys. In addition, your Administrator can program **Line** keys as Shared Line keys. For administrative information on Shared Line keys, see *Shared Line Keys* on page 39.

## Viewing a Speed Dial Key

To view the current Speed Dial programmed on a **Personal** key:

1. Press **Superkey**, and then press **>>** until PROGRAM MEMORY KEYS? appears on the display.
2. Press **OK**. SELECT A KEY appears on the display.
3. Press a **Personal** key. If the key has been programmed, the programming information appears on the display. If the key has not been programmed, UNUSED KEY appears on the display.

## Programming a Speed Dial Key

To program a Speed Dial key:

1. Press **Superkey**, and then press **>>** until PROGRAM MEMORY KEYS? appears on the display.
2. Press **OK**. SELECT A KEY appears on the display.

3. Press the **Personal** key you wish to program. The associated programming information appears on the display. If the key is not currently programmed, UNUSED KEY appears on the display.
4. Do one of the following:
   - If the selected key is currently programmed, press **DELETE**. ENTER NUMBER appears on the display.
   - If the selected key is not currently programmed, press **ADDNEW**. ENTER NUMBER appears on the display.
5. Do one of the following:
   - If you want to enter a name, press **NAME**.
   - If you want to enter a SIP URL or an IP address, press **URL**.
6. Enter the destination information, and then press **SAVE**. KEY SAVED appears on the display.
7. Press **OK**. PROGRAM MEMORY KEYS? appears on the display.
8. Do one of the following:
   - To program additional Speed Dials, press **OK**. SELECT A KEY appears on the display.
   - To return to the default display, press **Superkey**.
9. For instructions on adding a label beside a programmed **Personal** key, refer to the Installation Guide packaged with your phone.

## Editing a Speed Dial Key

To edit a Speed Dial key:

1. Press **Superkey**, and then press **>>** until PROGRAM MEMORY KEYS? appears on the display.
2. Press **OK**. SELECT A KEY appears on the display.
3. Press the **Personal** key from which you want to edit its Speed Dial programming. The associated programming information appears on the display.
4. Press **EDIT**, and then make your changes.

   **Note:** Press <—— to delete characters.
5. Press **SAVE**. KEY SAVED appears on the display.
6. Press **OK**. PROGRAM MEMORY KEYS? appears on the display.
7. Do one of the following:
   - To modify additional Speed Dials, press **OK**. SELECT A KEY appears on the display.
   - To return to the default display, press **Superkey**.
8. For instructions on adding a label beside a programmed **Personal** key, refer to the Installation Guide packaged with your phone.

## Deleting a Speed Dial Key

To delete a Speed Dial key:

1. Press **Superkey**, and then press **>>** until PROGRAM MEMORY KEYS? appears on the display.
2. Press **OK**. SELECT A KEY appears on the display.
3. Press the **Personal** key from which you want to delete its Speed Dial programming. The associated programming appears on the display.
4. Press **DELETE**. DELETE ITEM? appears on the display.
5. Press **YES**. UNUSED KEY appears on the display.
6. Do one of the following:
   - To return to the main menu, press **EXIT**.
   - To return to the default display, press **Superkey**.

## Making Calls Using Speed Dial

To make a Speed Dial call:

1. Lift the handset.
2. Press the **Personal** key programmed with the desired Speed Dial. The call is made.

# Time and Date

A Simple Network Time Protocol (SNTP) server (version 4 or later) provides your phone with the date and time; therefore, your Administrator will configure your time zone once using the Web Configuration Tool, and then an automatic adjustment will occur for Daylight Savings. However, if an SNTP server is not available in your system setup, you can modify the time and date using your phone or the Date/Time page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7). For more information, contact your Administrator.

**Note:** You cannot change your time and date settings while on a call.

**Note:** If your phone loses power, the modified time and date are not saved.

## Changing the Time and Date

**Important:** Use this procedure only if an SNTP server is not provided. You will need to reprogram these settings every time the phone reboots. If an SNTP server is available and you manually modify the time and date using the Web Configuration Tool, the SNTP server will reset your changes to the correct time and date.

To change the display's time and date:

1. Press **Superkey**, and then press **>>** until SETTINGS & OPTIONS? appears on the display.
2. Press **OK**, and then press ▼ until TIME AND DATE? appears on the display.

3. Press **OK**. SET TIME? appears on the display.
4. Do one of the following:
   - To change the time, press **YES**. 12 OR 24 HR FORMAT? appears on the display. Proceed to step 5.
   - To change the date, press **NO**. SET DATE? appears on the display. Proceed to step 9.
5. Do one of the following:
   - To enter the time in a.m./p.m. format, press **12**.
   - To enter the time using the 24-hour clock, press **24**.
6. Enter the time (for example, 1236 for 12:36; 0220 for 02:20), and then press **SUBMIT**.
7. (For a.m./p.m. only) Press **AM** or **PM**. SET TIME? appears on the display with the new time.
8. Press **NO**. SET DATE? appears on the display.
9. Do one of the following:
   - To change the date, press **YES**, and then proceed to step 10.
   - To return to the main menu, press **NO**, and then proceed to step 11.
10. Enter the date (for example, enter 161204 for 16 December 2004), and then press **SUBMIT**. SET DATE? appears on the display with the new date.
11. Do one of the following:
    - To return to the main menu, press **NO**.
    - To return to the default display, press **Superkey**.

# Administrator Tools

This section contains administrative information to configure the 5215 or 5220 IP Phone's user and administrative settings using the Superkey Menu Interface, including

- Using default administrator user names and passwords for the phone.
- Changing user or administrative passwords for the phone.
- Configuring and viewing user SIP accounts, and modifying display names.
- Viewing device parameters, including the software version and MAC address of the phone.
- Enabling/disabling the communication and media protocols for remote connection to the phone.
- Viewing and modifying IP and MAC addresses and network settings.
- Performing firmware upgrades in the main program.
- Configuring voice mail.
- Adjusting automatic Daylight Savings information.
- Programming Shared Line keys.
- Setting additional information, such as generic and specific configuration files and Hot Lines.

## Phone Passwords

As the Administrator, use the default administrator user names and passwords to first access all configurable features of the 5215 or 5220 IP Phone. It is recommended that you change these passwords as soon as possible to prevent unauthorized changes to the phone.

For privacy reasons, an asterisk ( ✳ ) appears for each character you enter.

**Note:** The asterisk and pound sign ( **#** ) are not valid characters in a password.

**CAUTION: Do not modify any settings that may affect the transmission of voice or tones (such as DTMF) to the local telephone network through your Service Provider, except at the express instruction of your Service Provider. An example of such a modification would be to change the CODEC type. Failure to heed this cautionary note may render your phone non-compliant to local regulations.**

**Table 3: 5215 IP Phone Default Administrator User Name and Password**

| | Default User Name | Default Password |
|---|---|---|
| **Administrator** | admin | 5215 |

**Table 4: 5220 IP Phone Default Administrator User Name and Password**

| | Default User Name | Default Password |
|---|---|---|
| **Administrator** | admin | 5220 |

**Note:** For Web Configuration Tool administrator and user password information, see *Web Configuration Tool Passwords* on page 10.

## Changing Phone Passwords

To change user or administrator passwords, access the Users & Passwords page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

The administrator default user name cannot be changed.

**Note:** To prevent unauthorized access to the phone's administrator functions, change the administrator password as soon as possible.

# Device Parameters

## Viewing the Software Version and MAC Address

To view the software version and MAC address for the phone:

1. Press **Superkey**, and then press **>>** until ADMIN TOOLS? appears on the display.
2. Press **OK**. DEVICE PARAMETERS? appears on the display.
3. Press **OK**. SOFTWARE VERSION appears on the display.
4. You can choose to either view the software version or the MAC address.

   To view the software version:

   – Press **REVIEW**. The current software version appears on the display.
   – Press **OK**. SOFTWARE VERSION appears on the display.

   OR

   To view the MAC address:

   – Press **NEXT**. MAC ADDRESS appears on the display.
   – Press **REVIEW**. The current MAC address appears on the display.
   – Press **OK**. MAC ADDRESS appears on the display.
5. Do one of the following:
   - To return to the main menu, press **EXIT**.
   - To return to the default display, press **Superkey**.

**Note:** You can also view the MAC address using the **Line 1** key (see *Viewing the IP and MAC Addresses* on page 36).

# Protocols

You can control whether the phone can be accessed through the following communication and media protocols:

- Hypertext Transfer Protocol (HTTP)
- Trivial File Transfer Protocol (TFTP)
- Telnet
- Simple Network Management Protocol (SNMP)
- Secure Real-time Transport Protocol (SRTP).

## Enabling/Disabling Communication and Media Protocols

**Note:** To have access to the Web Configuration Tool, HTTP must be enabled. If HTTP is disabled (e.g. for security reasons) and you need access to the tool, then enable HTTP through the Superkey Menu Interface by following the steps in this section.

To enable or disable the communication protocols and media protocols for remote connection to the phone:

1. Press **Superkey**, and then press **>>** until ADMIN TOOLS? appears on the display.
2. Press **OK**, and then press ▼ until ACCESS PROTOCOLS? appears on the display.
3. Press **OK**, enter your administrator password, and then press **SUBMIT**. HTTP <current status> appears on the display.
4. Do one of the following:
   - To enable HTTP, press **TURNON**.
   - To disable HTTP, press **TURNOFF**.
   - To enable or disable TFTP, press **NEXT**.
5. Repeat steps 3 and 4 for TFTP, Telnet, SNMP and SRTP. After you enable or disable a protocol, that protocol and its new status appears on the display.
6. Do one of the following:
   - To return to the main menu, press **EXIT**.
   - To return to the default display, press **Superkey**.

**Note:** You can also use the Web Configuration Tool to enable or disable these protocols. To do so, access the tool's Protocols page (see *The Web Configuration Tool* on page 7).

# User SIP Accounts

A user SIP account includes a user name and password, and allows the user to register with the SIP Service Provider. When registered, the user can dial by user ID name or extension number. For more information, see *Making Calls* on page 15.

## Configuring a User SIP Account

Access the User Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7) to configure the user name and password required to register a SIP user with the SIP Service Provider.

## Modifying the Display Name

The display name is the name displayed on a user's phone. That name also appears on the phone display of the party to whom the user is connected. To set or modify the display name, access the User Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

## Viewing a User Name

To view the phone's active user name:

1. Press **Superkey**.
2. Press the third **Personal** key (counting upwards from the bottom on the 5215 IP Phone) or the **Line 3** key (5220 IP Phone). The user display name (top) and user name (bottom) appears.
3. Press **Superkey** to return to the default display.

# View/Modify the Network Settings

## Viewing the IP and MAC Addresses

To view the phone's IP and MAC addresses:

1. Press **Superkey**, and then press the **Line 1** key. The IP and MAC addresses appear.
2. Press **Superkey** to return to the default display.

## Modifying Network Settings

For a list of the network configuration settings available through the Superkey Menu Interface, see *Appendix A — Superkey Menu Interface* on page 42.

To modify a phone's network configuration settings:

3. Press **Superkey**, and then press **>>** until ADMIN TOOLS? appears on the display.
4. Press **OK**, and then press ▼ until NETWORK SETTINGS? appears on the display.
5. Press **OK**, enter your administrator password, and then press **SUBMIT**.
6. Press **NEXT** until the network configuration settings you want to change appear on the display.
7. Press **REVIEW** to view the current settings of the selected setting, and then do one of the following:
   - (Optional) To enable or disable DHCP, press **TURNON** or **TURNOFF**.

- To change a value, press **CHANGE**, enter the new value, and then press **SUBMIT**. After the information is saved, the next setting appears on the display.
- To leave a value as it is, press **EXIT** or **NEXT**.

8. Repeat steps 4 and 5 until all desired changes have been made.
9. Press **Superkey** to return to the default display.
10. For the settings to take effect, reboot the phone (i.e. unplug the power source from the phone, and then plug the power source back in).

**Note:** For information on hotkeys to reboot the 5215 or 5220 IP Phone, refer to the Web Configuration Tool online Help for the Administrator (see *Supporting Documentation* on page 2).

**Note:** To modify additional network settings available in the boot program, see *Appendix B — Configuring SIP Settings in the Boot Program* on page 44.

**Note:** You can also use the Web Configuration Tool to modify the network settings. To do so, access the tool's Network Configuration page (see *The Web Configuration Tool* on page 7).

# Upgrade the Phone's Firmware

The phone uses TFTP to download firmware from a TFTP server, or HTTP to download firmware from the HTTP server. You can use either the phone or the Web Configuration Tool (see *The Web Configuration Tool* on page 7) to perform a firmware upgrade. If you use the Web Configuration Tool, access the tool's Firmware Update page.

If you use the Web Configuration Tool, the phone's original configuration is preserved; therefore, the phone will function as it did prior to upgrade, without the need to reconfigure settings.

If you use the options available on the phone, previous configurations may not be saved and restored; therefore, you may have to manually reload a previously saved configuration file or manually reconfigure phone parameters.

## Viewing the Firmware Version

To view the current firmware version:

1. Press **Superkey**.
2. Press the **Line 2** key. Both the main and boot firmware versions appear on the display.
3. Press **Superkey** to return to the default display.

**Note:** You also view firmware versions on the Web Configuration Tool home page (see *The Web Configuration Tool* on page 7).

## Upgrading the Firmware

To upgrade the phone's firmware through the Superkey Menu Interface, download the new firmware from the appropriate HTTP or TFTP server. To program the HTTP or TFTP server,

access the Network Configuration and Firmware Update pages of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

The options available to perform an HTTP or TFTP firmware upgrade include

- **OFF**: If HTTP or TFTP is set to **OFF**, then firmware upgrades will not occur.
- **ON**: This option compares the current firmware versions with the versions available on the SIP server. If HTTP or TFTP is set to **ON** and the firmware currently loaded on the phone and the firmware available on the server differ, then you will be prompted to confirm the upgrade.
- **AUTO**: If HTTP or TFTP is set to **AUTO** and the firmware currently loaded on the phone and the firmware available on the server differ, then an upgrade will automatically occur without user intervention. Usually, an automatic upgrade will occur every 24 hours at approximately midnight. The phone must be idle in order for the automatic upgrade to occur. After a successful firmware download, the phone will reboot.

**Note**: HTTP takes priority over TFTP if both modes are enabled (i.e. On); otherwise, the firmware will download in the specified mode.

**CAUTION: During this procedure, DO NOT remove power from the phone while firmware is downloading or the phone is rebooting. This may result in severe damage to your phone.**

To upgrade the phone's firmware in the main program:

1. Press **Superkey**, and then press **>>** until SETTINGS & OPTIONS? appears on the display.
2. Press **OK**, and then press ▼ until UPGRADE FIRMWARE? appears on the display.
3. Press **OK**. CHOOSE PROTOCOL appears on the display.
4. Press the desired protocol (**HTTP** or **TFTP**), or press **AUTO**. BEGIN UPGRADE NOW? appears on the display.
5. Press **CONFIRM**. The downloading process begins and the phone reboots. This process may take approximately 1 to 2 minutes. When the time and date appear on the display, the download and reboot is complete and the phone is ready for use.

**Note:** You can also update the firmware in the boot program. For more information, see *Appendix B — Configuring SIP Settings in the Boot Program* on page 44. In addition, you can update the firmware using the Firmware Update page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

# Voice Mail

Voice mail for SIP-supported phones is server-based. For more information on the voice mail system, contact your SIP Service Provider.

## Configuring Voice Mail

To configure voice mail:

1. Press **Superkey**, and then press **>>** until ADMIN TOOLS? appears on the display.

2. Press **OK**, and then press ▼ until NETWORK SETTINGS? appears on the display.
3. Press **OK**, enter your administrator password, and then press **SUBMIT**.
4. Press **NEXT** until VOICE MAIL SERVER appears, and then press **REVIEW**.
5. Press **CHANGE**, enter the IP address of the voice mail server, and then press **SUBMIT**. After the information is saved, VOICE MAIL SERVER appears on the display.
6. Press **NEXT**. VOICE MAIL PORT NUM appears on the display.
7. Press **REVIEW**, and then press **CHANGE**.
8. Enter the voice mail port number, and then press **SUBMIT**. After the information is saved, VOICE MAIL PORT NUM appears on the display.
9. Do one of the following:
   - To return to the main menu, press **EXIT**.
   - To return to the default display, press **Superkey**.

**Note:** You can also use the Web Configuration Tool to configure voice mail. To do so, access the tool's SIP Configuration page (see *The Web Configuration Tool* on page 7).

# Daylight Savings

## Adjusting Daylight Savings

To make adjustments to the automatic Daylight Savings for the phone, access the Network Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

# Shared Line Keys

## Programming Shared Line Keys

Shared Line keys can be either

- Key System Lines: allow an extension number to appear on multiple phones; however, if the shared line on a phone is in use, all associated shared lines on the other phones are busy.
- Direct Station Lines: allow you to direct a call to another phone in the group, depending on the status of the call.

To program Shared Line keys, access the Key Programming page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

# Additional Settings

Additional settings that you can program or modify include

- Configuration files
- Hot Line
- Media configurations.

## Configuration Files

The 5215 and 5220 IP Phones support configuration files for automatic programming. The two types of configuration files are

- Generic file: applies its defined settings to all SIP-supported phones.
- Specific file: applies its defined settings to a specific SIP-supported phone.

Configuration files are stored on the HTTP server or the TFTP server. The generic configuration file is loaded first, then the specific configuration file. If both files contain settings for the same parameter, the specific configuration file will overwrite the information from the generic configuration file.

Before a 5215 or 5220 IP Phone can automatically download configuration files from an HTTP or a TFTP server, you must access the Network Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7) to configure the following options:

- HTTP Server or TFTP Server
- Use HTTP/TFTP Configuration Files.

When a phone with these settings reboots, the phone first requests the generic configuration file from the HTTP or TFTP server. If the file exists, it is downloaded and all of its parameters overwrite the existing parameters on the phone. The phone then requests the specific configuration file from the HTTP or TFTP server. If the file exists, it is downloaded and all of its parameters overwrite the existing parameters on the phone. Only the parameters defined in the configuration files are overwritten on the phone. If the phone requests a configuration file that is not on the HTTP or TFTP server, settings on the phone do not change.

**Note:** When a 5215 or 5220 IP Phone uses configuration files, you can still change settings manually; however, if these settings are also defined in the configuration files, the files will overwrite the manual settings the next time the phone reboots.

### Generic Configuration File (SIPGeneric.cfg)

You use the generic configuration file to change global settings such as Media Configuration and Voice Mail. The generic configuration file is a text file saved as SIPGeneric.cfg on the HTTP or TFTP server. To create a generic configuration file, use a text application such as Notepad or SimpleText, or use your favorite word processing application and save the file as a text file.

**Note:** If you exceed the number of characters allowed in a field in the generic configuration file, then the information in that field will be rejected.

### Specific Configuration File (SXXXXXXXXXXXX.cfg)

You use the specific configuration file to change phone-specific settings such as user names and passwords, and Hot Line configurations. Each specific configuration file (one per phone) is a text file saved as SXXXXXXXXXXXX.cfg on the TFTP server, where the Xs are the 12-character hexadecimal MAC address of the phone. To create a specific configuration file, use a text application such as Notepad or SimpleText, or use your favorite word processing application and save the file as a text file.

**Note:** If you exceed the number of characters allowed in a field in the specific configuration file, then the information in that field will be rejected.

## Hot Line

When a Hot Line number, SIP URL or an IP address is set up, the 5215 or 5220 IP Phone automatically dials that number or address when taken off-hook.

To program a Hot Line, access the User Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7).

## Media Configuration

To change the Media Configuration settings, access the Media Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7). Media Configuration settings include parameters for sending and receiving audio signals over the IP network.

# Appendix A — Superkey Menu Interface

You use the Superkey Menu Interface to view or program many of the 5215 and 5220 IP Phone features in the main program, or the "regular" state of the phone. To access the Superkey Menu Interface, press **Superkey** when your phone is idle.

This section explains the purpose of many Superkey Menu Interface menus and settings.

## Superkey Menu Interface Menus and Settings

The following table lists the type and purpose of main menus and submenus available through the Superkey Menu Interface:

**Table 5: Superkey Menu Interface Menus and Settings**

| Main Menu | Submenu | Notes |
|---|---|---|
| PHONEBOOK? | PROGRAM ADDRESS? | To add/edit/delete an entry's SIP URL or IP address. |
| | PROGRAM NAME? | To add/edit/delete an entry name. |
| CALL LOGS? | 1. MISSED CALLS? | Log of missed calls. You can make calls from this log. |
| | 2. ANSWERED CALLS? | Log of answered calls. You can make calls from this log. |
| | 3. OUTGOING CALLS? | Log of outgoing calls made from your phone. You can make calls from this log. |
| SETTINGS & OPTIONS? | 1.CALL FORWARDING? *Always, No Answer, Busy* | To program/enable/disable Call Forward. |
| | 2. DO NOT DISTURB? | To enable/disable the Do Not Disturb feature. |
| | 3. ADVISORY MESSAGE? | To enable/disable a short text message advising callers of your whereabouts (e.g. IN A MEETING; ON VACATION). |
| | 4. TIME AND DATE? | To configure the time and date on your phone. |
| | 5. RINGER SOUNDS? | To program the ringer pitch and volume. |
| | 6. UPGRADE FIRMWARE? | To upgrade HTTP, TFTP or perform an automatic firmware upgrade. |
| | 7. LANGUAGE? | To program the display language. |
| PROGRAM MEMORY KEYS? | SELECT A KEY | To program **Personal** keys with Speed Dials. Your Administrator can also program **Personal** keys as Shared Line keys. |
| ADMIN TOOLS? | 1. DEVICE PARAMETERS? | To view the current boot and main software versions loaded in the phone, and the MAC address for the phone. |

**Table 5: Superkey Menu Interface Menus and Settings (continued)**

| Main Menu | Submenu | Notes |
|---|---|---|
| | 2. ACCESS PROTOCOLS? | (Administrator password required) To control which communication protocols and media protocols are made available to connect remotely to the phone. As well, you can disable access to some or all protocols, if required, for security reasons. You can also modify the protocols using the Protocols page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7). |
| | 3. NETWORK SETTINGS?<br>*DHCP*<br>*Phone IP Address*<br>*Phone Subnet Mask*<br>*Default Gateway*<br>*Outbound Server*<br>*Outbound Server Port*<br>*SIP Proxy Server*<br>*SIP Proxy Port Num*<br>*Voicemail Server*<br>*Voicemail Port Num*<br>*Primary DNS Server*<br>*Secondary DNS Server*<br>*TFTP Server*<br>*SNTP Server* | (Administrator password required) To change network settings. You can also change additional network settings in the boot program (see *Appendix B — Configuring SIP Settings in the Boot Program* on page 44) or using the Network Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7). To access the Network Settings menu through the Superkey Menu Interface, enter your password when prompted, and then press **SUBMIT**. |

# Appendix B — Configuring SIP Settings in the Boot Program

In addition to using the Superkey Menu Interface or the Web Configuration Tool to modify SIP configuration settings, the Administrator can also modify these and additional settings in the boot program. In terms of the boot program, this section explains how to

- Use the many SIP configuration menus.
- Modify the network settings and parameters.
- Configure hardware settings.
- Upgrade the phone's firmware.
- Change the phone mode to SIP or MiNET, if desired.

## SIP Configuration Menus and Settings

The following table describes the main and sub-SIP configuration menus available in the boot program:

**Table 6: SIP Configuration Menus in the Boot Program**

| Main Menu | Submenu | Notes |
|---|---|---|
| NETWORK SETTINGS? | MODIFY SETTINGS?<br>*Network Type: LAN, xDSL or Cable* | Provides access to SIP-specific network settings in the boot program. Also provides an option to restore factory defaults. |
| | EXIT MENU? | Returns you to the main menu (i.e. NETWORK SETTINGS?). |
| NETWORK PARAMETERS? | VIEW CURRENT VALUES?<br>*MAC Address*<br>*Phone Address*<br>*Default Gateway IP*<br>*Subnet Mask*<br>*Host Name*<br>*Proxy IP Address*<br>*TFTP SVR IP Address*<br>*VLAN ID*<br>*VLAN Priority*<br>*DNS1 IP Address*<br>*DNS2 IP Address* | Displays the current parameter settings.<br><br>*VLAD ID* and *VLAN Priority* submenus allow you to enter **NONE** by pressing **Cancel**. |

**Table 6: SIP Configuration Menus in the Boot Program (continued)**

| Main Menu | Submenu | Notes |
|---|---|---|
| | VIEW DHCP VALUES?<br>*T1 (seconds)*<br>*T1 Left (seconds)*<br>*T2 (seconds)*<br>*T2 Left (seconds)* | Displays the DHCP settings. |
| | VIEW STATIC VALUES?<br>*Phone IP Address*<br>*Default Gateway IP*<br>*Subnet Mask*<br>*Host Name*<br>*Proxy Address*<br>*TFTP SVR IP Address*<br>*TFTP SVR Port*<br>*VLAN ID*<br>*VLAN Priority*<br>*DNS1 IP Address*<br>*DNS2 IP Address* | Displays the static parameter settings. |
| | MODIFY STATIC VALUE? | Allows you to edit the static parameters and provides the option to restore factory defaults. |
| | EXIT MENU? | Returns you to the main menu (i.e. NETWORK PARAMETERS?). |
| HARDWARE CONFIG? | VIEW CUR PORT SETT?<br>*LAN Port Speed*<br>*LAN Port Duplex*<br>*LAN Port Flow CTRL*<br>*PC Port Speed*<br>*PC Port Duplex*<br>*PC Port Flow CTRL* | Allows you to view the current LAN and PC port settings. |
| | MODIFY PORT SETTING? | Allows you to edit the hardware configuration settings and provides the option to restore factory defaults. |
| | EXIT MENU? | Returns you to the main menu (i.e. HARDWARE CONFIG?). |
| PHONE MODE? | PROTOCOL? | Allows you to configure the phone to MiNET or SIP. Default is MiNET. |
| | EXIT MENU? | Returns you to the main menu (i.e. PHONE MODE?). |
| UPGRADE SETTINGS? | MODIFY SETTINGS?<br>*TFTP Upgrade*<br>*HTTP Upgrade* | Allows you perform a TFTP or an HTTP firmware upgrade on your phone and provides the option to restore factory defaults. |
| | EXIT MENU? | Returns you to the main menu (i.e. UPGRADE SETTINGS?). |

**Table 6: SIP Configuration Menus in the Boot Program (continued)**

| Main Menu | Submenu | Notes |
|---|---|---|
| TOOLS AND FEATURES? | PING TEST?<br>*Phone IP Address*<br>*Default Gateway IP*<br>*Subnet Mask*<br>*VLAN ID*<br>*VLAN Priority* | Allows you to ping the parameters. |
| | DHCP TRACE?<br>*Phone IP*<br>*Subnet Mask*<br>*Gateway*<br>*DNS Server (1 – 4)*<br>*Host Name*<br>*WINS Server*<br>*Lease (seconds)*<br>*DHCP Server ID*<br>*T1, T2 (seconds)*<br>*TFTP Server (1 – 2)*<br>*SIP Proxy*<br>*ICP Server (1 – 4)*<br>*Mitel ID*<br>*IPA Address*<br>*VLAN ID*<br>*VLAN Priority*<br>*Video Server*<br>*HTTP Proxy*<br>*Mitel SIP ID*<br>*SIP Proxy IP*<br>*SIP Proxy Name* | Allows you to perform a DHCP trace. If VLAN information is available, you will be presented with the option of using VLAN to perform the trace. |
| | PORT OPTIONS?<br>*Port Mirroring* | Allows you to enable or disable LAN and PC port mirroring for debugging purposes. |
| | DIAGNOSTICS? | Allows you to view the last recorded error or “assert“ that the phone may detect during the boot program. |
| | RESTORE DEFAULTS? | Allows you to restore the phone to the same configurations as it came from the factory (i.e. MiNET mode with no parameters set for either MiNET or SIP mode, and with the default hardware settings). Option often appears after you’ve made changes. |
| | EXIT MENU? | Returns you to the main menu (i.e. TOOLS AND FEATURES?). |
| VIEW VERSION INFO? | N/A | Allows you to view the current main, boot and L2boot programs. |
| EXIT AND REBOOT? | N/A | Allows you to reboot your phone so your changes will take effect. |

# Network Settings in the Boot Program

## Modifying Network Settings in the Boot Program

To modify the network settings in the boot program:

1. Plug the DC adapter cord into the power input, and press and hold ⌄ and ⌃ at the same time until NETWORK SETTINGS? appears on the display.
2. Press **YES**. MODIFY SETTINGS? appears on the display.
3. You can choose to either enter the new settings yourself or restore the factory default settings.

   To enter the new settings:

   – Press **YES**. NETWORK TYPE: <current type> appears on the display.
   – Press **CHANGE**, and then press the desired network type (i.e. LAN, xDSL, Cable). NETWORK TYPE <new type> appears on the display.
   – Press **ACCEPT**. STORE CHANGES? appears on the display.

     **Note:** If the phone is in xDSL mode, you will be prompted to enter your administrator user name and password (use ✳ to backspace or delete).

   – Press **YES**. "SAVING TO NVRAM. Do not remove power" appears on the display, followed by NVRAM SAVE COMPLETE and REBOOT NOW?.
   – If you have completed all desired changes, press **YES** to reboot the phone for the changes to take effect (when the date and time appear, the phone is ready for use). If you want to make further changes, press **NO**. EXIT MENU? appears on the display. To return to the main menu, press **YES**.

   OR

   To restore the factory default settings:

   – Press **DEFAULT**. USE FACTORY DEFAULT? appears on the display.
   – Press **YES**. STORE CHANGES? appears on the display.
   – Press **YES**. The factory defaults are restored and the phone reboots. When the date and time appear on the display, the phone is ready for use.

# Static Network Parameters in the Boot Program

## Configuring Network Parameters in the Boot Program

If a DHCP server is not available in your SIP setup, manually configure the basic SIP network parameters in the main program using the Superkey Menu Interface or the Web Configuration Tool. If connectivity to the main program is lost, conduct the configuration during the boot program.

To configure basic static SIP network parameters in the boot program:

1. Plug the DC adapter cord into the power input, and press and hold ⌄ and ⌃ at the same time until NETWORK SETTINGS? appears on the display.

2. Press ▼ until NETWORK PARAMETERS? appears on the display, and then press **YES**. VIEW CURRENT VALUES? appears on the display.
3. (Optional) Press **YES**, and then press and to navigate through the parameters. When you return to VIEW CURRENT VALUES?, proceed to step 4.
4. Press **NO**. VIEW STATIC VALUES? appears on the display.
5. (Optional) Press **YES**, and then press and to navigate through the parameters. When you return to VIEW STATIC VALUES?, proceed to step 6.
6. Press **NO**. MODIFY STATIC VALUES? appears on the display.
7. You can choose to either enter the new static values yourself or restore the factory default settings.

   To enter the new static values:

   – Press **YES**, and then press **CHANGE** or **NOCHANGE** for each static value.
   – If you choose to change a value, enter the new value, and then press **ACCEPT**. STORE CHANGES? appears on the display.
   – Press **YES**. "SAVING TO NVRAM. Do not remove power" appears, followed NVRAM SAVE COMPLETE and REBOOT NOW?.
   – If you have completed all desired changes, press **YES** to reboot the phone for the changes to take effect (when the date and time appear, the phone is ready for use). If you want to make further changes, press **NO**. EXIT MENU? appears on the display. To return to the main menu, press **YES**.

   OR

   To restore the factory default settings:

   – Press **DEFAULT**. USE FACTORY DEFAULT? appears on the display.
   – Press **YES**. STORE CHANGES? appears on the display.
   – Press **YES**. The factory defaults are restored and the phone reboots. When the date and time appear on the display, the phone is ready for use.

# Hardware Settings in the Boot Program

## Configuring Hardware Settings in the Boot Program

To configure the phone's hardware settings in the boot program:

1. Plug the DC adapter cord into the power input, and press and hold and at the same time until NETWORK SETTINGS? appears on the display.
2. Press **NO** until HARDWARE CONFIG? appears on the display, and then press **YES**. VIEW CUR PORT SETT? appears on the display.
3. (Optional) Press **YES**. VIEW CUR PORT SETT? appears on the display again at the end of the current port settings list.
4. Press **NO**. MODIFY PORT SETTINGS? appears on the display.
5. You can choose to either enter the new hardware settings yourself or restore the factory default settings.

To enter the new hardware settings:

- Press **YES**, and then press **CHANGE** or **NOCHANGE** for each hardware setting.
- If you choose to change a setting, enter the new setting, and then press **ACCEPT**. STORE CHANGES? appears on the display.
- Press **YES**. "SAVING TO NVRAM. Do not remove power" appears on the display, followed NVRAM SAVE COMPLETE and REBOOT NOW?.
- If you have completed all desired changes, press **YES** to reboot the phone for the changes to take effect (when the date and time appear on the display, the phone is ready for use). If you want to make further changes, press **NO**. EXIT MENU? appears on the display. To return to the main menu, press **YES**.

OR

To restore the factory default settings:

- Press **DEFAULT**. USE FACTORY DEFAULT? appears on the display.
- Press **YES**. STORE CHANGES? appears on the display.
- Press **YES**. The factory defaults are restored and the phone reboots. When the date and time appear on the display, the phone is ready for use.

# Firmware Upgrade in the Boot Program

## Performing a Firmware Upgrade in the Boot Program

The main purpose of the boot program is to start the main program, and re-install the main program.

**Note:** For definitions of firmware upgrade options **OFF**, **ON** and **AUTO**, see *Upgrading the Firmware* on page 37.

To upgrade your phone's firmware in the boot program:

1. Plug the DC adapter cord into the power input, and press and hold and at the same time until NETWORK SETTINGS? appears on the display.
2. Press **NO** until UPGRADE SETTINGS? appears on the display, and then press **YES**. MODIFY SETTINGS? appears on the display.
3. Press **YES**. TFTP UPGRADE: <current status> appears on the display.
4. You can choose to either enable or disable TFTP or HTTP, or set an automatic TFTP or HTTP firmware upgrade.

   **Note:** If TFTP or HTTP are disabled, then you will not be able to perform a firmware upgrade.

   To enable or disable TFTP, or set an automatic TFTP firmware upgrade:

   - Press **ON** or **OFF** to enable or disable TFTP, or **AUTO** to set an automatic upgrade. TFTP UPGRADE: <new status> appears on the display.
   - Press **ACCEPT**. HTTP UPGRADE: <current status> appears on the display.

- If you choose to change HTTP as well, proceed to "*To enable or disable HTTP, or set an automatic HTTP firmware upgrade"* on this page. If you choose not to change HTTP, press **NOCHANGE**. STORE CHANGES? appears on the display.
- Press **YES**. "SAVING TO NVRAM. Do not remove power" appears on the display, followed by NVRAM SAVE COMPLETE and REBOOT NOW?.
- If you have completed all desired changes, press **YES** to reboot the phone for the changes to take effect (when the date and time appear on the display, the phone is ready for use). If you want to make further changes, press **NO**. EXIT MENU? appears on the display. To return to the main menu, press **YES**.

OR

To enable or disable HTTP upgrade, or set an automatic HTTP firmware upgrade:

- At TFTP UPGRADE: <current status>, press **NO**. HTTP UPGRADE: <current status> appears on the display.
- Press **ON** or **OFF** to enable or disable HTTP, or **AUTO** to set an automatic upgrade. HTTP UPGRADE: <new status> appears on the display.
- Press **NOCHANGE**. STORE CHANGES? appears on the display.
- Press **YES**. "SAVING TO NVRAM. Do not remove power" appears on the display, followed by NVRAM SAVE COMPLETE and REBOOT NOW?.
- If you have completed all desired changes, press **YES** to reboot the phone for the changes to take effect (when the date and time appear on the display, the phone is ready for use). If you want to make further changes, press **NO**. EXIT MENU? appears on the display. To return to the main menu, press **YES**.

# Phone Mode in the Boot Program

## Changing the Phone Mode in the Boot Program

To change the phone mode to MiNET from SIP in the boot program:

1. Plug the DC adapter cord into the power input, and press and hold and at the same time until NETWORK SETTINGS? appears on the display.
2. Press **NO** until PHONE MODE? appears on the display, and then press **YES**. PROTOCOL? appears on the display.
3. Press **YES**. PHONE MODE: SIP appears on the display.
4. Press **CHANGE**, and then press **MiNET**. PHONE MODE: MiNET appears on the display.
5. Press **ACCEPT**. STORE CHANGES? appears on the display.
6. Press **YES**. "SAVING TO NVRAM. Do not remove power" appears, followed by NVRAM SAVE COMPLETE and REBOOT NOW?.
7. Do one of the following:
   - If you have made all desired changes, press **YES** to reboot the phone for the changes to take effect. When the date and time appear on the display, the phone is ready for use.
   - If you want to make further changes, press **NO** to exit to the main menu.

8. To change the phone mode back to SIP from MiNET, repeat steps 1 to 7; however, in step 4, press **SIP**.

**Note:** For information on using the 5215 or 5220 IP Phone in MiNET mode, refer to the 5215 and 5220 IP Phone User Guides of your supporting Mitel Integrated Communications Platform (ICP) (see *Supporting Documentation* on page 2).

# Factory Default Settings in the Boot Program

## Restoring Factory Default Settings in the Boot Program

To restore the phone's factory default settings in the boot program:

1. Plug the DC adapter cord into the power input, and press and hold and at the same time until NETWORK SETTINGS? appears on the display.
2. Press **NO** until TOOLS AND FEATURES? appears on the display, and then press **YES**.
3. Press **NO** until RESTORE DEFAULTS? appears on the display, and then press **YES**. STORE CHANGES? appears on the display.
4. Press **YES**. The factory defaults are restored and the phone reboots for the changes to take effect. When the date and time appear on the display, the phone is ready for use.

# Firmware Versions in the Boot Program

## Viewing Firmware Versions in the Boot Program

To view the phone's current firmware versions:

1. Plug the DC adapter cord into the power input, and press and hold and at the same time until NETWORK SETTINGS? appears on the display.
2. Press **NO** until TOOLS AND FEATURES? appears on the display, and then press **YES**.
3. Press **NO** until VIEW VERSION INFO? appears on the display, and then press **YES**.
4. Press and to navigate through and view the main, boot and L2boot program versions. VIEW VERSION INFO? appears on the display at the end of the list.
5. Press **NO** to return to the main menu.

# Appendix C — Troubleshooting

This section contains troubleshooting information about

- Phones working behind a non-SIP compliant router.
- Phone error messages.
- Maintenance logs.
- Call statistics to remotely debug audio problems.
- Time and date correction on your phone.
- Mirroring LAN and PC ports.
- Pinging an IP address.
- Performing a DHCP trace.
- Diagnostics (i.e. errors or “asserts”).

## Phones Working Behind a Non-SIP Compliant Router

The following table presents a solution to your phone not working behind a non-SIP compliant router:

**Table 7: Non-SIP Compliant Router**

| Problem | Solution |
|---|---|
| 5215 or 5220 IP Phone does not seem to work behind a non-SIP compliant router. | Follow the steps in the *Working with Firewalls* topic in the Web Configuration Tool online Help - Administrator. To access the Help, see *Supporting Documentation* on page 2. |

# Phone Error Messages

The following table presents solutions to messages that may indicate a problem:

**Table 8: Phone Error Messages**

| Message | Description | Solution |
|---|---|---|
| PPPoE Initialize | 5215 or 5220 IP Phone is configured to work with a DSL connection using PPPoE; however, this connection cannot be established – the phone is stuck on "PPPoE Initialize" during the boot program. | 1. Check the PPPoE login name and password.<br>2. Ensure the DSL modem is plugged in, and powered up. |
| *NO REG* | Appears on the 5215 or 5220 IP Phone, indicating that the phone has failed to register with a SIP registration server. Connection to a SIP registration server is necessary for your phone to make and receive SIP calls. | 1. Ensure SIP registration server is running.<br>2. If your SIP registration server is located on the Internet, then ensure you have a working connection to the Internet.<br>3. In the *SIP Configuration* page of the Web Configuration Tool, ensure that<br>• **Bypass Firewall NAT** is **On**<br>• **Mode** is set to **Dynamic**<br>• **WAN IP Discovery URL** is correct (http://sipdnld.mitel.com/Remote.shtml). |
| TRANSF N/A | Appears instead of **TRANS/CONF** when the user is trying to establish a conference call. | Reconfigure the phone that initiated the call and/or the phone that received the call to either<br>• G729A & G711uLaw & G729ALaw<br>• G729A & G711ALaw & G711uLaw<br>• G711uLaw & G711ALaw & G729A<br>• G711Alaw & G711uLaw & G729A.<br>To do this, access the Media Configuration page of the Web Configuration Tool (see *The Web Configuration Tool* on page 7). |
| TRANSFER FAILED (or TRANS/CONF screen freezes) | During a conference call, neither party can transfer a call when all lines on the phone that initiated the conference call are in use at the same time. | Make at least one line on the phone that initiated the conference call available. |

# Maintenance Logs

Maintenance logs list the tasks performed on the phone, and detail such information as the date and time of the call, caller identification, keys pressed, prompts displayed and call control.

## Viewing Maintenance Logs

To view the maintenance logs:

1. On your PC, launch your browser.
2. In your browser's **URL** or **Address** field, do the following:
   - To start the log, enter your phone's IP address followed by mlogs. For example, http://12.34.56.78/mlogs. The maintenance logs appear on the screen.
   - To end the log, enter your phone's IP address followed by mloge. For example, http://12.34.56.78.mloge. The maintenance logs appear on the screen.

## Saving Maintenance Logs

To save the maintenance logs you are currently viewing:

- On the **File** menu of your browser, choose **Save As…**, and then save the log as a text file (.txt).

# Audio

To obtain audio and packet statistics to remotely debug a phone's audio problems:

1. On your PC, launch your browser.
2. In your browser's **URL** or **Address** field, enter the phone's IP address followed by mstats. For example, http://12.34.56.78/mstats.

# Time and Date

## Setting the Correct Time and Date on the Phone

Use the Web Configuration Tool to configure your 5215 or 5220 IP Phone to obtain the time and date automatically by consulting a Simple Network Time Protocol Server (SNTP), version 4 or later. To do so, access the tool's Network Configuration page (see *The Web Configuration Tool* on page 7).

**Note:** If there is no SNTP server, use the Date/Time page of the Web Configuration Tool to set the correct time and date (see *The Web Configuration Tool* on page 7).

# Port Mirroring

## Enabling/Disabling Port Mirroring

You may want to mirror the LAN and PC ports to and from the phone for debugging purposes.

To enable or disable port mirroring:

1. Plug the DC adapter cord into the power input, and press and hold and at the same time until NETWORK SETTINGS? appears on the display.
2. Press **NO** until TOOLS AND FEATURES? appears on the display, and then press **YES**.
3. Press **NO** until PORT OPTIONS? appears on the display, and then press **YES**. PORT MIRRORING: <current status> appears on the display.
4. Do one of the following:
   - To enable port mirroring, press **TURNON**.
   - To disable port mirroring, press **TURNOFF**.

# Ping Test

## Pinging an IP Address

The ping test allows you to enter the appropriate network information required to ping a specified IP address.

To ping an IP address in the boot program:

1. Plug the DC adapter cord into the power input, and press and hold and at the same time until NETWORK SETTINGS? appears on the display.
2. Press **NO** until TOOLS AND FEATURES? appears on the display, and then press **YES**. PING TEST? appears on the display.
3. Press **YES**. PING TEST PARMS appears on the display
4. Press and to navigate the phone's IP address, default gateway's IP address and the subnet mask, and then enter the appropriate data.
5. The ping test results appear, followed by REBOOT NOW?.
6. Do one of the following:
   - If you have made all desired changes, press **YES** to reboot the phone for all changes to take effect. When the date and time appear, the phone is ready for use.
   - If you want to make further changes, press **NO** to return to the main menu.

# DHCP Trace

In order for the phone to perform a DHCP request, use the DHCP TRACE? submenu. You can then review the parameters that the DHCP returns. After you have reviewed the trace information, the DHCP Lease is released. If a previous DHCP offer included VLAN information, you will have the option to perform a DHCP trace using the VLAN information; however, this option will only be available if VLAN information is available when you initiate the test.

## Performing a DHCP Trace

To perform a DHCP trace:

1. Plug the DC adapter cord into the power input, and press and hold and at the same time until NETWORK SETTINGS? appears on the display.
2. Press **NO** until TOOLS AND FEATURES? appears on the display, and then press **YES**.
3. Press **NO** until DHCP TRACE? appears on the display, and then press **YES**. USE VLAN FOR DHCP? appears on the display if VLAN is available. If VLAN is not available, then DHCP TRACE: RESULTS appears on the display.
4. (Optional) If USE VLAN FOR DHCP? appears on the display, press **YES**. DHCP TRACE: RESULTS appears on the display.
5. Press and to view the results. DHCP TRACE? appears on the display at the end of the results.
6. Press **NO** to exit to the main menu.

# Diagnostics

## Performing a Diagnostics Test

To perform a diagnostics test to view the last recorded error or “assert”:

1. Plug the DC adapter cord into the power input, and press and hold and at the same time until NETWORK SETTINGS? appears on the display.
2. Press **NO** until TOOLS AND FEATURES? appears on the display, and then press **YES**.
3. Press **NO** until DIAGNOSTICS? appears on the display, and then press **YES**. LAST ASSERT/EXCEPT appears on the display.
4. Press **SELECT** to view the last recorded error. If there are no errors to report, NO ASSERTS/EXCEPTS appears on the display.
5. Press **BACKSPACE** to exit to the main menu.

# Glossary

| Term | Definition |
|---|---|
| DHCP | Dynamic Host Configuration Protocol |
| HTTP | Hypertext Transfer Protocol |
| ICP | Integrated Communications Platform |
| ID | Identification |
| IP | Internet Protocol |
| LAN | Local Area Network |
| MAC | Media Access Control |
| PSTN | Public Switched Telephone Network |
| SIP | Session Initiation Protocol |
| SNMP | Simple Network Management Protocol |
| SNTP | Simple Network Time Protocol |
| SRTP | Secure Real-time Transport Protocol |
| TFTP | Trivial File Transfer Protocol |
| URL | Uniform Resource Locator |
| VLAN | Virtual LAN |

®,™ Trademark of Mitel Networks Corporation
© Copyright 2004, Mitel Networks Corporation
All rights reserved